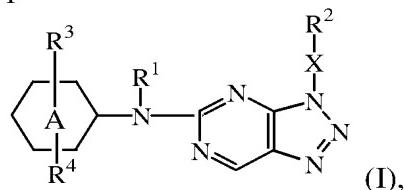


This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims

1. (Currently amended) A compound of formula



a *N*-oxide, a pharmaceutically acceptable addition salt, a quaternary amine and a stereochemically isomeric form thereof, wherein

ring A represents phenyl, ~~pyridyl, pyrimidinyl, pyridazinyl or pyrazinyl~~;

R¹ represents hydrogen; aryl; formyl; C₁-6alkylcarbonyl; C₁-6alkyl; C₁-6alkyloxycarbonyl; C₁-6alkyl substituted with formyl, C₁-6alkylcarbonyl, C₁-6alkyloxycarbonyl, C₁-6alkylcarbonyloxy; or C₁-6alkyloxyC₁-6alkylcarbonyl optionally substituted with C₁-6alkyloxycarbonyl;

X represents a direct bond; -(CH₂)_{n3}- or -(CH₂)_{n4}-X_{1a}-X_{1b}-;

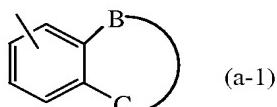
with n₃ representing an integer with value 1, 2, 3 or 4;

with n₄ representing an integer with value 1 or 2;

with X_{1a} representing O, C(=O) or NR⁵; and

with X_{1b} representing a direct bond or C₁-2alkyl;

R² represents C₃-7cycloalkyl; phenyl; a 4, 5, 6- or 7-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N; benzoxazolyl or a radical of formula



wherein -B-C- represents a bivalent radical of formula

-CH₂-CH₂-CH₂- (b-1);

-CH₂-CH₂-CH₂-CH₂- (b-2);

-X₁-CH₂-CH₂-(CH₂)_n- (b-3);

-X₁-CH₂-(CH₂)_n-X₁- (b-4);

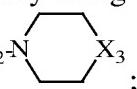
-X₁-(CH₂)_n-CH=CH- (b-5);

-CH=N-X₁- (b-6);

with X₁ representing O or NR⁵;

n representing an integer with value 0, 1, 2 or 3;
n' representing an integer with value 0 or 1;

wherein said R² substituent, where possible, may optionally be substituted with at least one substituent selected from halo; hydroxy; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkyloxyC₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; C₂₋₆alkenyl or C₂₋₆alkynyl, each optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; polyhalo-C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkyloxyC₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; C₁₋₆alkyloxy optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyl-oxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; polyhaloC₁₋₆alkyloxy optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; C₁₋₆alkylthio; polyhaloC₁₋₆alkylthio; C₁₋₆alkyloxycarbonyl; C₁₋₆alkylcarbonyloxy; C₁₋₆alkylcarbonyl; polyhaloC₁₋₆alkylcarbonyl; cyano; carboxyl; NR⁶R⁷; C(=O)NR⁶R⁷; -NR⁵-C(=O)-NR⁶R⁷; -NR⁵-C(=O)-R⁵; -S(=O)_{n1}-R⁸; -NR⁵-S(=O)_{n1}-R⁸; -S-CN; -NR⁵-CN; aryloxy; arylthio; arylcarbonyl; arylC₁₋₄alkyl; arylC₁₋₄alkyloxy; a 5-or 6-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N and said 5-or 6-membered monocyclic heterocycle optionally being substituted with at least

one substituent selected from R⁹; or -(CH₂)_{n2}-X₂-(CH₂)_{n2}N;

with n2 representing an integer with value 0, 1, 2, 3 or 4;

with X₂ representing O, NR⁵ or a direct bond;

with X₃ representing O, CH₂, CHO, CH-N(R⁵)₂, NR⁵ or N-C(=O)-C₁₋₄alkyl;

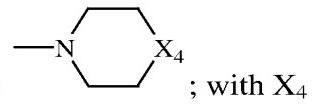
R³ represents halo; hydroxy; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkyloxy-C₁₋₄alkyloxy, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR^{6b}R^{7b}, -C(=O)-NR^{6b}R^{7b}, -NR⁵-C(=O)-NR^{6b}R^{7b}, -S(=O)_{n1}-R^{8a} or -NR⁵-S(=O)_{n1}-R^{8a}; C₂₋₆alkenyl or C₂₋₆alkynyl, each optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR^{6b}R^{7b}, -C(=O)-NR^{6b}R^{7b}, -NR⁵-C(=O)-NR^{6b}R^{7b}, -S(=O)_{n1}-R^{8a} or -NR⁵-S(=O)_{n1}-R^{8a}; polyhaloC₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkyloxy-C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR^{6b}R^{7b}, -C(=O)-NR^{6b}R^{7b}, -NR⁵-C(=O)-NR^{6b}R^{7b}, -S(=O)_{n1}-R^{8a} or -NR⁵-S(=O)_{n1}-R^{8a}; C₁₋₆alkyloxy optionally substituted with one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxy-carbonyl, C₁₋₄alkylcarbonyloxy, NR^{6b}R^{7b}, -C(=O)-NR^{6b}R^{7b}, -NR⁵-C(=O)-NR^{6b}R^{7b}, -S(=O)_{n1}-R^{8a} or -NR⁵-S(=O)_{n1}-R^{8a}; polyhaloC₁₋₆alkyloxy optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkyloxy-C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR^{6b}R^{7b}, -C(=O)-NR^{6b}R^{7b}, -NR⁵-C(=O)-NR^{6b}R^{7b}, -S(=O)_{n1}-R^{8a} or -NR⁵-S(=O)_{n1}-R^{8a}; C₁₋₆alkylthio; polyhaloC₁₋₆alkylthio; C₁₋₆alkyloxycarbonyl; C₁₋₆alkylcarbonyloxy; C₁₋₆alkylcarbonyl; polyhalo-C₁₋₆alkylcarbonyl; cyano; carboxyl; aryloxy; arylthio; arylcarbonyl; NR^{6b}R^{7b}; C(=O)-NR^{6b}R^{7b}; -NR⁵-C(=O)-NR^{6b}R^{7b}; -NR⁵-C(=O)-R⁵; -S(=O)_{n1}-R^{8a}; -NR⁵-S(=O)_{n1}-R^{8a}; -S-CN; or -NR⁵-CN;

R⁴ represents hydrogen; halo; hydroxy; C₁₋₄alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR¹⁰R¹¹, -C(=O)-NR¹⁰R¹¹, -NR⁵-C(=O)-NR¹⁰R¹¹, -S(=O)_{n1}-R¹² or -NR⁵-S(=O)_{n1}-R¹²; C₂₋₄alkenyl or C₂₋₄alkynyl, each optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR¹⁰R¹¹, -C(=O)-NR¹⁰R¹¹, -NR⁵-C(=O)-NR¹⁰R¹¹, -S(=O)_{n1}-R¹² or -NR⁵-S(=O)_{n1}-R¹²; polyhaloC₁₋₃alkyl; C₁₋₄alkyloxy optionally substituted with carboxyl; polyhaloC₁₋₃alkyloxy; C₁₋₄alkylthio; polyhaloC₁₋₃alkylthio; C₁₋₄alkyloxycarbonyl; C₁₋₄alkylcarbonyloxy; C₁₋₄alkylcarbonyl; polyhaloC₁₋₄alkylcarbonyl; nitro; cyano; carboxyl; NR¹⁰R¹¹;

C(=O)NR¹⁰R¹¹; -NR⁵-C(=O)-NR¹⁰R¹¹; -NR⁵-C(=O)-R⁵; -S(=O)_{n1}-R¹²;
-NR⁵-S(=O)_{n1}-R¹²; -S-CN; or -NR⁵-CN;

R⁵ represents hydrogen; C₁₋₄alkyl or C₂₋₄alkenyl;

R⁶ and R⁷ each independently represent hydrogen; cyano; C₁₋₆alkylcarbonyl optionally substituted with C₁₋₄alkyloxy or carboxyl; C₁₋₆alkyloxycarbonyl; C₃₋₇cycloalkylcarbonyl; adamantanylcarbonyl; C₁₋₄alkyloxyC₁₋₄alkyl; C₁₋₄alkyl substituted with C₁₋₄alkyl-NR⁵-; C₁₋₆alkyl optionally substituted with at least one substituent selected from halo, hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, polyhalo-



C₁₋₄alkyl, C₁₋₄alkyloxyC₁₋₄alkyloxy, NR^{6a}R^{7a}, C(=O)NR^{6a}R^{7a} or ; with X₄ representing O, CH₂, CHO, CH-N(R⁵)₂, NR⁵ or N-C(=O)-C₁₋₄alkyl;

R^{6a} and R^{7a} each independently represent hydrogen; C₁₋₄alkyl; C₁₋₄alkylcarbonyl or a 5- or 6-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N;

R^{6b} and R^{7b} each independently represent hydrogen; cyano; C₁₋₆alkylcarbonyl optionally substituted with C₁₋₄alkyloxy or carboxyl; C₁₋₆alkyloxycarbonyl; C₃₋₇cycloalkylcarbonyl; adamantanylcarbonyl; C₁₋₄alkyloxyC₁₋₄alkyl; C₁₋₄alkyl substituted with C₁₋₄alkyl-NR⁵-; C₁₋₆alkyl optionally substituted with at least one substituent selected from halo, hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, polyhaloC₁₋₄alkyl, C₁₋₄alkyloxy-C₁₋₄alkyloxy, NR^{6c}R^{7c} or C(=O)NR^{6c}R^{7c};

R^{6c} and R^{7c} each independently represent hydrogen; C₁₋₄alkyl or C₁₋₄alkylcarbonyl;

R⁸ represents C₁₋₄alkyl optionally substituted with hydroxy; polyhaloC₁₋₄alkyl or NR⁶R⁷;

R^{8a} represents C₁₋₄alkyl optionally substituted with hydroxy; polyhaloC₁₋₄alkyl or NR^{6b}R^{7b};

R⁹ represents halo; hydroxy; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; C₂₋₆alkenyl or C₂₋₆alkynyl, each optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl,

C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; polyhaloC₁₋₆alkyl; C₁₋₆alkyloxy optionally substituted with carboxyl; polyhaloC₁₋₆alkyloxy; C₁₋₆alkylthio; polyhaloC₁₋₆alkylthio;

C₁₋₆alkyloxycarbonyl; C₁₋₆alkylcarbonyloxy; C₁₋₆alkylcarbonyl; cyano; carboxyl; NR⁶R⁷; C(=O)NR⁶R⁷; -NR⁵-C(=O)-NR⁶R⁷; -NR⁵-C(=O)-R⁵; -S(=O)_{n1}-R⁸; -NR⁵-S(=O)_{n1}-R⁸; -S-CN; or -NR⁵-CN;

R¹⁰ and R¹¹ each independently represent hydrogen; C₁₋₆alkyl; cyano; C₁₋₆alkylcarbonyl; C₁₋₄alkyloxyC₁₋₄alkyl; or C₁₋₄alkyl substituted with C₁₋₄alkyl-NR⁵-;

R¹² represents C₁₋₄alkyl or NR¹⁰R¹¹;

n1 represents an integer with value 1 or 2;

aryl represents phenyl or phenyl substituted with at least one substituent selected from halo, C₁₋₆alkyl, C₃₋₇cycloalkyl, C₁₋₆alkyloxy, cyano, nitro, polyhaloC₁₋₆alkyl or polyhaloC₁₋₆alkyloxy.

2. (Original) A compound according to claim 1 wherein

X represents a direct bond; -(CH₂)_{n3}- or -(CH₂)_{n4}-X_a-X_b-;

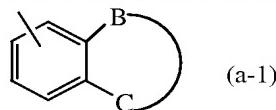
with n₃ representing an integer with value 1, 2, 3 or 4;

with n₄ representing an integer with value 1 or 2;

with X_a representing O or NR⁵; and

with X_b representing a direct bond or C₁₋₂alkyl;

R² represents C₃₋₇cycloalkyl; phenyl or a 4, 5, 6- or 7-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N; or a radical of formula



wherein -B-C- represents a bivalent radical of formula

-CH₂-CH₂-CH₂- (b-1);

-CH₂-CH₂-CH₂-CH₂- (b-2);

-X₁-CH₂-CH₂-(CH₂)_n- (b-3);

-X₁-CH₂-(CH₂)_n-X₁- (b-4);

-X₁-(CH₂)_n·-CH=CH- (b-5);

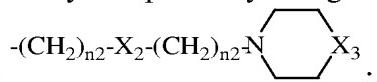
with X₁ representing O or NR⁵;

n representing an integer with value 0, 1, 2 or 3;

n' representing an integer with value 0 or 1;

wherein said R² substituent, where possible, may optionally be substituted with at least one substituent selected from halo; hydroxy; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; C₂₋₆alkenyl or C₂₋₆alkynyl, each optionally substituted with at least one substituent selected from

hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; polyhaloC₁₋₆alkyl; C₁₋₆alkyloxy optionally substituted with carboxyl; polyhaloC₁₋₆alkyloxy; C₁₋₆alkylthio; polyhaloC₁₋₆alkylthio; C₁₋₆alkyloxycarbonyl; C₁₋₆alkylcarbonyloxy; C₁₋₆alkylcarbonyl; polyhaloC₁₋₆alkylcarbonyl; cyano; carboxyl; NR⁶R⁷; C(=O)NR⁶R⁷; -NR⁵-C(=O)-NR⁶R⁷; -NR⁵-C(=O)-R⁵; -S(=O)_{n1}-R⁸; -NR⁵-S(=O)_{n1}-R⁸; -S-CN; -NR⁵-CN; aryloxy; arylthio; arylcarbonyl; arylC₁₋₄alkyl; arylC₁₋₄alkyloxy; a 5-or 6-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N and said 5-or 6-membered monocyclic heterocycle optionally being substituted



with at least one substituent selected from R⁹; or

with n2 representing an integer with value 0, 1, 2, 3 or 4;

with X₂ representing O, NR⁵ or a direct bond;

with X₃ representing O or NR⁵;

R³ represents halo; hydroxy; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR^{6b}R^{7b}, -C(=O)-NR^{6b}R^{7b}, -NR⁵-C(=O)-NR^{6b}R^{7b}, -S(=O)_{n1}-R^{8a} or -NR⁵-S(=O)_{n1}-R^{8a}; C₂₋₆alkenyl or C₂₋₆alkynyl, each optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR^{6b}R^{7b}, -C(=O)-NR^{6b}R^{7b}, -NR⁵-C(=O)-NR^{6b}R^{7b}, -S(=O)_{n1}-R^{8a} or -NR⁵-S(=O)_{n1}-R^{8a}; polyhaloC₁₋₆alkyl; C₁₋₆alkyloxy optionally substituted with carboxyl; polyhaloC₁₋₆alkyloxy; C₁₋₆alkylthio; polyhaloC₁₋₆alkylthio; C₁₋₆alkyloxycarbonyl; C₁₋₆alkylcarbonyloxy; C₁₋₆alkyl- carbonyl; polyhaloC₁₋₆alkylcarbonyl; nitro; cyano; carboxyl; NR^{6b}R^{7b}; C(=O)NR^{6b}R^{7b}; -NR⁵-C(=O)-NR^{6b}R^{7b}; -NR⁵-C(=O)-R⁵; -S(=O)_{n1}-R^{8a}; -NR⁵-S(=O)_{n1}-R^{8a}; -S-CN; or -NR⁵-CN;

R⁵ represents hydrogen or C₁₋₄alkyl;

R⁶ and R⁷ each independently represent hydrogen; cyano; C₁₋₆alkylcarbonyl; C₁₋₄alkyloxyC₁₋₄alkyl; C₁₋₄alkyl substituted with C₁₋₄alkyl-NR⁵-; C₁₋₆alkyl optionally substituted with hydroxy, C₁₋₄alkyloxy, C₁₋₄alkyloxyC₁₋₄alkyloxy, NR^{6a}R^{7a}, C(=O)NR^{6a}R^{7a}

or ; with X₄ representing O or NR⁵;

R^{6a} and R^{7a} each independently represent hydrogen; C₁₋₄alkyl; C₁₋₄alkylcarbonyl or a 5- or 6-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N;

R^{6b} and R^{7b} each independently represent hydrogen; cyano; C₁₋₆alkylcarbonyl; C₁₄alkyloxyC₁₋₄alkyl; C₁₋₄alkyl substituted with C₁₋₄alkyl-NR⁵⁻; C₁₋₆alkyl optionally substituted with hydroxy, C₁₋₄alkyloxy, C₁₋₄alkyloxyC₁₋₄alkyloxy, NR^{6a}R^{7a} or C(=O)NR^{6a}R^{7a};

R⁸ represents C₁₋₄alkyl, polyhaloC₁₋₄alkyl or NR⁶R⁷;

R^{8a} represents C₁₋₄alkyl, polyhaloC₁₋₄alkyl or NR^{6b}R^{7b}.

3. (Currently amended) A compound as claimed in claim 1 wherein ~~ring A represents phenyl or pyridyl~~; R¹ represents hydrogen; X represents a direct bond or -(CH₂)_{n3}-; R² represents phenyl or a radical of formula (b-4), wherein said R² may optionally be substituted with at least one substituent, in particular 1, 2 or 3 substituents, selected from halo; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, NR⁶R⁷, C(=O)NR⁶R⁷, C₁₋₄alkyloxy or C₁₋₄alkyloxyC₁₋₄alkyloxy; C₁₋₆alkyloxy; C₁₋₆alkyloxycarbonyl; C₁₋₄alkyloxyC₁₋₆alkyloxy; cyano; carboxyl; C(=O)NR⁶R⁷; -S(=O)_{n1}-R⁸; arylC₁₋₄alkyloxy; or a 5-or 6-membered heterocycle containing at least one heteroatom selected from O, S or N and said 5-or 6-membered heterocycle optionally being substituted with at least one substituent selected from R⁹; R³ represents halo; hydroxy; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, NR^{6b}R^{7b} or C(=O)NR^{6b}R^{7b}; C₂₋₆alkenyl optionally substituted with at least one substituent selected from carboxyl or C₁₋₄alkyl-oxycarbonyl; polyhaloC₁₋₆alkyloxy; C₁₋₆alkyloxy optionally substituted with C₁₋₄alkyloxy; C₁₋₆alkylthio; C₁₋₆alkyloxycarbonyl; C₁₋₆alkylcarbonyl; cyano; carboxyl; NR^{6b}R^{7b}; C(=O)NR^{6b}R^{7b}; -NR⁵-C(=O)-R⁵; -S(=O)_{n1}-R⁸; -NR⁵-S(=O)_{n1}-R⁸; or -S-CN; R⁴ represents hydrogen; halo; C₁₋₆alkyl; cyano; hydroxy; C₁₋₆alkyloxycarbonyl; C₁₋₆alkyloxy; carboxyl; or NR⁶R⁷.

4. (Currently amended) A compound as claimed in claim 1 wherein ~~ring A represents phenyl or pyridyl~~; R¹ represents hydrogen; X represents a direct bond; R² represents phenyl wherein said R² may optionally be substituted with at least one substituent, in particular 1, 2 or 3 substituents, selected from halo; C₁₋₆alkyl substituted with one substituent selected from hydroxy, cyano, NR⁶R⁷, C(=O)NR⁶R⁷, C₁₋₄alkyloxy or C₁₋₄alkyloxyC₁₋₄alkyloxy; C₁₋₆alkyloxy; C₁₋₆alkyloxycarbonyl; C₁₋₄alkyloxyC₁₋₆alkyloxy; C(=O)NR⁶R⁷;

-S(=O)_{n1}-R⁸; or a 5-or 6-membered heterocycle containing at least one heteroatom selected from O, S or N and said 5-or 6-membered heterocycle optionally being substituted with at least one substituent selected from R⁹; R³ represents halo; hydroxy; C₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, NR^{6b}R^{7b} or C(=O)NR^{6b}R^{7b}; C₂₋₆alkenyl optionally substituted with at least one substituent selected from carboxyl or C₁₋₄alkyloxycarbonyl; polyhaloC₁₋₆alkyloxy; C₁₋₆alkyloxy optionally substituted with C₁₋₄alkyloxy or NR^{6b}R^{7b}; C₁₋₆alkylthio; C₁₋₆alkyloxycarbonyl; C₁₋₆alkylcarbonyl; cyano; carboxyl; NR^{6b}R^{7b}; C(=O)NR^{6b}R^{7b}; -S(=O)_{n1}-R⁸; -NR⁵-C(=O)-R⁵; or -NR⁵-S(=O)_{n1}-R⁸; R⁴ represents hydrogen; halo; C₁₋₆alkyl; hydroxy; C₁₋₆alkyloxycarbonyl; C₁₋₆alkyloxy; carboxyl; or NR⁶R⁷.

5. (Previously presented) A compound as claimed in claim 1 wherein the R³ substituent is linked to ring A in meta position compared to the NR¹ linker.

6. (Previously presented) A compound as claimed in claim 1 wherein the R³ substituent is linked to ring A in para position compared to the NR¹ linker.

7. (Previously presented) A compound as claimed in claim 1 wherein R³ represents NR^{6b}R^{7b}.

8. (Previously presented) A compound as claimed in claim 1 wherein X represents a direct bond.

9. (Previously presented) A compound as claimed in claim 1 wherein R² represents C₃₋₇cycloalkyl; phenyl; a 4, 5, 6- or 7-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N; benzoxazolyl or a radical of formula (a-1) wherein said R² substituent is substituted with at least one substituent selected from C₁₋₆alkyl substituted with NR⁶R⁷; C₂₋₆alkenyl or C₂₋₆alkynyl, each substituted with NR⁶R⁷; polyhaloC₁₋₆alkyl substituted with NR⁶R⁷; C₁₋₆alkyloxy substituted with NR⁶R⁷; polyhaloC₁₋₆alkyloxy substituted with NR⁶R⁷; or NR⁶R⁷.

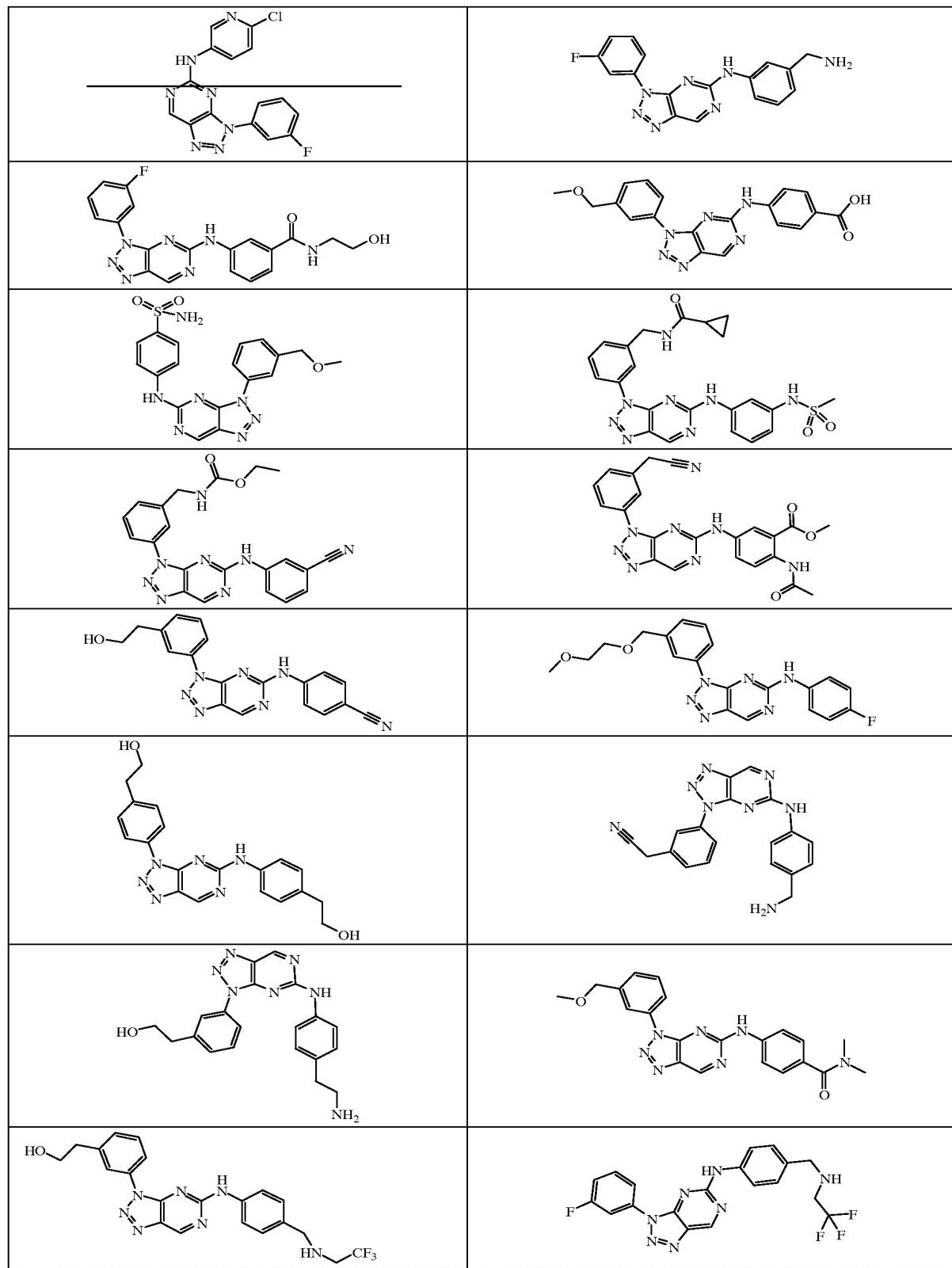
10. (Previously presented) A compound as claimed in claim 1 wherein R³ represents C₁₋₆alkyl substituted with NR^{6b}R^{7b}; C₂₋₆alkenyl or C₂₋₆alkynyl, each substituted with NR^{6b}R^{7b};

polyhaloC₁₋₆alkyl substituted with NR^{6b}R^{7b}; C₁₋₆alkyloxy substituted with NR^{6b}R^{7b}; polyhaloC₁₋₆alkyloxy substituted with NR^{6b}R^{7b}; or NR^{6b}R^{7b}.

11. (Previously presented) A compound as claimed in claim 1 wherein R² represents C₃₋₇cycloalkyl; phenyl; a 4, 5, 6- or 7-membered monocyclic heterocycle containing at least one heteroatom selected from O, S or N; benzoxazolyl or a radical of formula (a-1), wherein said R² substituent is substituted with at least one substituent selected from halo; polyhaloC₁₋₆alkyl optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkyloxy-

C₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸; polyhalo-C₁₋₆alkyloxy optionally substituted with at least one substituent selected from hydroxy, cyano, carboxyl, C₁₋₄alkyloxy, C₁₋₄alkyloxyC₁₋₄alkyloxy, C₁₋₄alkylcarbonyl, C₁₋₄alkyloxycarbonyl, C₁₋₄alkylcarbonyloxy, NR⁶R⁷, -C(=O)-NR⁶R⁷, -NR⁵-C(=O)-NR⁶R⁷, -S(=O)_{n1}-R⁸ or -NR⁵-S(=O)_{n1}-R⁸.

12. (Currently amended) A compound as claimed in claim 1 wherein the compound is selected from the group consisting of



[REDACTED]

a *N*-oxide, a pharmaceutically acceptable addition salt, a quaternary amine and a stereochemically isomeric form thereof.

13. (Previously presented) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and the compound of claim 1.

14. (Previously presented) A method for the prevention or the treatment of a disease mediated through GSK3 comprising administering a therapeutically effective amount of a compound of claim 1 to a patient in need of treatment for a disease mediated through GSK3.

15. (Previously presented) The method for the prevention or the treatment of a disease mediated through GSK3 of claim 14 wherein the disease is selected from the group consisting of bipolar disorder (in particular manic depression), diabetes, Alzheimer's disease, leukopenia, FTDP-17 (Fronto-temporal dementia associated with Parkinson's disease), cortico-basal degeneration, progressive supranuclear palsy, multiple system atrophy, Pick's disease, Niemann Pick's disease type C, Dementia Pugilistica, dementia with tangles only, dementia with tangles and calcification, Downs syndrome, myotonic dystrophy, Parkinsonism-dementia complex of Guam, aids related dementia, Postencephalic Parkinsonism, prion diseases with tangles, subacute sclerosing panencephalitis, frontal lobe degeneration (FLD), argyrophilic grains disease, subacute sclerotizing panencephalitis (SSPE) (late complication of viral infections in the central nervous system), inflammatory diseases, depression, cancer, dermatological disorders, neuroprotection, schizophrenia, and pain.

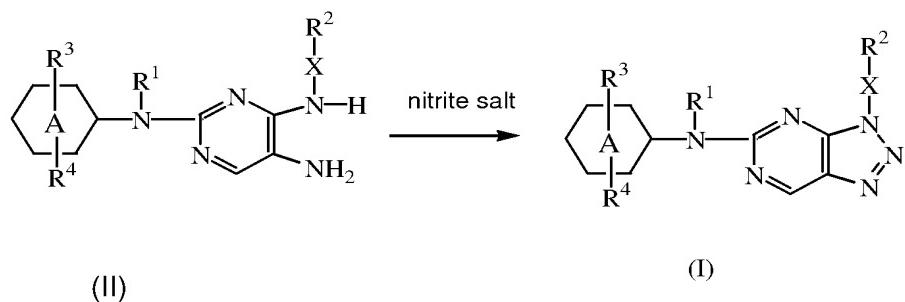
16. (Previously presented) The method for the prevention or the treatment of a disease mediated through GSK3 of claim 14 wherein the disease is selected from the group consisting of Alzheimer's disease; diabetes; cancer; inflammatory diseases; bipolar disorder; depression; and pain.

17. (Previously presented) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and as active ingredient a therapeutically effective amount of a compound as claimed in claim 1.

18. (Currently amended) A process for preparing a pharmaceutical composition as claimed in claim 17 characterized in that comprising intimately mixing a therapeutically effective amount of a compound as claimed in claim 1 is intimately mixed with a pharmaceutically acceptable carrier.

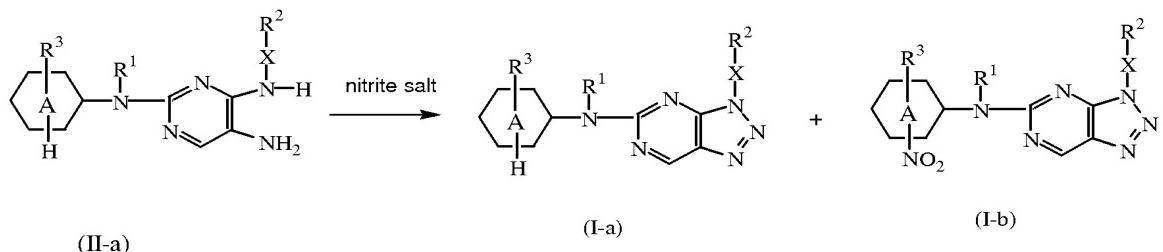
19. (Currently amended) A process for preparing a compound as claimed in claim 1, characterized by comprising

a) by cyclizing an intermediate of formula (II) in the presence of a nitrite salt, a suitable solvent, and a suitable acid,



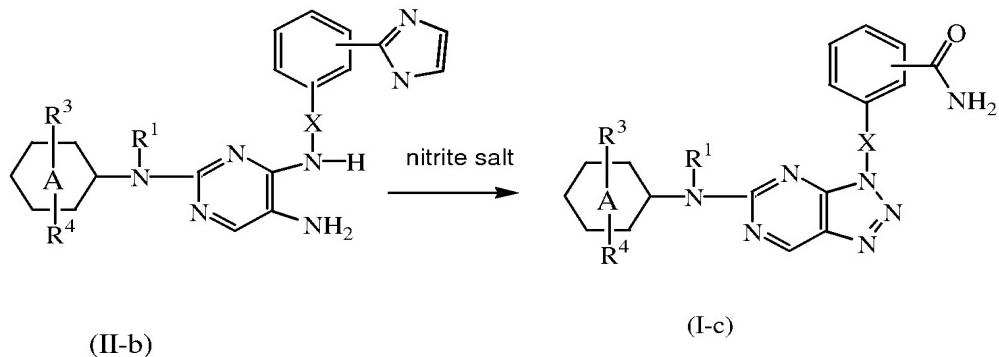
wherein ring A, R¹ to R⁴ and X are as defined in claim 1;

b) cyclizing an intermediate of formula (II-a) in the presence of a nitrite salt, a suitable solvent, and a suitable acid,



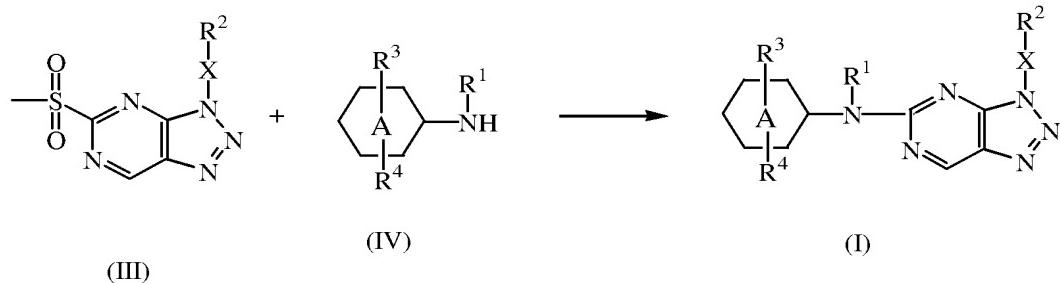
wherein ring A, R¹ to R³ and X are as defined in claim 1;

c) cyclizing an intermediate of formula (II-b) in the presence of a nitrite salt, a suitable solvent, and a suitable acid,



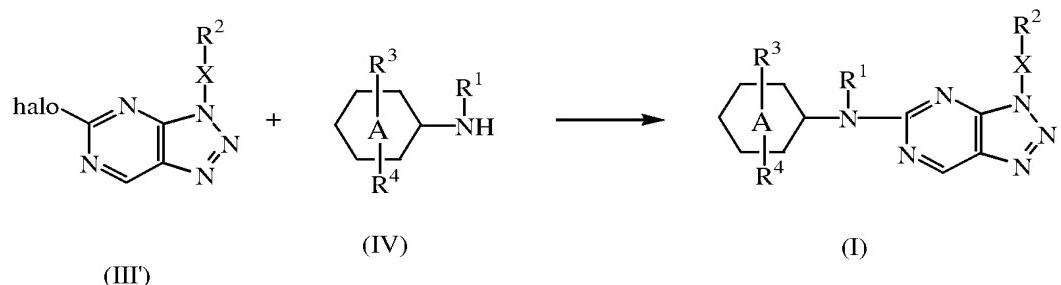
wherein ring A, R¹, R³, R⁴ and X are as defined in claim 1;

d) reacting an intermediate of formula (III) with an intermediate of formula (IV) in the presence of a suitable solvent,



wherein ring A, R¹ to R⁴ and X are as defined in claim 1;

e) reacting an intermediate of formula (III') with an intermediate of formula (IV) in the presence of a suitable solvent, and optionally in the presence of a suitable base,



or, if desired optionally, converting compounds of formula (I) into each other following art-known transformations, and further, if desired, converting the compounds of formula (I), into a therapeutically active non-toxic acid addition salt by treatment with an acid, or into a therapeutically active non-toxic base addition salt by treatment with a base, or conversely, converting the acid addition salt form into the free base by treatment with alkali, or

DOCKET NO.: JANS-0090 (PRD2066USPCT1)
Application No.: 10/564,844
Office Action Dated: May 7, 2007

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converting the base addition salt into the free acid by treatment with acid; and, if desired optionally, preparing stereochemically isomeric forms, quaternary amines or *N*-oxide forms thereof.